

REMARKS

Claims 1 - 12 remain active in this application. Claim 12 has been slightly amended to correspond more closely to the terminology of page 10, lines 21 - 26. No new matter has been introduced into the application.

Restriction has been required between the inventions, as identified by the Examiner, of Group I, claims 1 - 10, directed to a metrology method; Group II, claim 11, directed to a metrology mark; and Group III, directed to a metrology apparatus. Provisional election of Group I, Claims 1 - 10 has been made above. However the requirement for restriction is respectfully traversed since neither distinctness/independence of the identified inventions nor a serious burden of examination in the absence of a requirement for restriction has been *prima facie* demonstrated.

Specifically, The Examiner's statement that "the process as claimed could be performed with any well-known alignment mark systems *that satisfy claim 1 requirements...*" (emphasis added) is and only trivially true and thus illusory; failing to demonstrate distinctness or independence or the existence of a serious burden. The statement is trivially true since claim 1 *is*, in fact, a method claim reciting particular features of a mark formed as part of the method and thus the claimed method, *of course*, could be performed by any apparatus or using any mark system satisfying the recitations of claim 1. See also the disclosure at page 10, lines 21 - 25 which indicates the features of the mark in accordance with the invention which support the practice thereof. The statement, particularly by referring to "any system" (which is qualified later in the sentence), glosses the fact that the features of the mark sufficient to support the successful practice of the invention are also recited in the claims of Groups II and III, particularly as now amended.

Therefore, while trivially true, the statement is not at all probative of the issue of independence or distinctness of the inventions identified by the Examiner but, *on the contrary*, tends to identify the inventions as a single invention and inventive concept which are not substantively separable, particularly as between Group I, the method including formation of the mark and Group II, the mark, itself, as would result from the corresponding steps of claim 1. Therefore, all three inventions, as identified by the Examiner, are unified or linked by the features of the mark and independence or distinctness has not been *prima facie* shown.

By the same token, since the features of the mark supporting practice of the invention in accordance with its basic principles are recited in all three groups of claims identified by the Examiner, it is clear that a search for the mark of Group II and the apparatus of Group III would be subsumed in a search for the elected method. Therefore, the existence of a serious burden of examination in the absence of a requirement for restriction has not been *prima facie* shown.

The Examiner's further statement that the mark could be used for other methods and devices is also respectfully submitted to be illusory and speculative since metrology marks are difficult and expensive to create and only the features necessary to support a given metrology technique are generally employed. Since the features of the mark recited in all three Groups of claims are specific to the principles of the present invention, they may be insufficient to or in excess of the practice of other methods or devices. In any case, since the features of the marks are recited in all identified groups of claims, the Examiner's observation is not probative of the issues of serious burden or independence or distinctness of the inventions.

Accordingly, since both independence or distinctness and the existence of a serious burden must be shown to demonstrate the propriety of a requirement for restriction, it is clear that the requirement is unsupported by either and thus improper. Accordingly, reconsideration and withdrawal of the requirement for restriction is respectfully requested.

Since all requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.



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PATENT TRADEMARK OFFICE

Respectfully submitted,

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APPENDIX

Claim 12:

12. (Amended) A non-imaging metrology apparatus comprising

means for storing spectral curves,

a specular spectroscopic scatterometer for measuring reflection from a plurality of marks formed by two levels of lithographic exposures and forming a periodic structure, and

means for comparing processed signals output from said specular spectroscopic scatterometer with said spectral curves to evaluate misalignment of said two lithographic exposures.